

ABSTRACT

A plastically deformable stent for implantation within a body passage includes a plurality of cylindrical segments, and a plurality of connectors extending between adjacent segments.

5 Each segment has an alternating pattern of curvilinear elements extending about its circumference, including first and second sets of curvilinear elements having different resistances to expansion, and preferably defining "U" shapes with alternating lengths that are connected to one another to define a

10 substantially sinusoidal pattern. The connectors define a sinusoidal shape adapted to extend and compress axially substantially evenly when the adjacent segments are subjected to bending. The stent may be delivered on a device including an elongate member with a nose cone, an expandable member, and a

15 proximal shoulder thereon, and an outer sheath for slidably receiving the elongate member therein. The outer sheath and/or nose cone may have perfusion holes for allowing continued perfusion of fluid during stent delivery. The device may be used in a method for implanting a stent within a curved region of a

20 body passage, particularly for creating and/or maintaining a channel connecting a vein to an adjacent artery, preferably in the coronary system.